although Cheyne, Portal, Morgagni, and others, observed it. Though frequent, it can scarcely be said, as far as has been ascertained, to be a constant phenomenon.—*British Med. Journal*, July 10, 1858.

5. *Investigations respecting the Development of Teeth.*—At a meeting of the French Academy of Sciences, M. Guillot read a paper on the above subject. I have been led, says the author, to explain the origin of the teeth in a novel manner, from examining very early embryos of the human and sheep kind, of less than two months, as also from observations made upon fish. I have discovered an organic substance, in the centre of which the first traces of the teeth may be observed; this substance, being intended for genesis and protection, disappears when this twofold function is performed. By the transformation of the molecules, by which it is composed, it successively produces the ivory, enamel, and cementum. The appearance of this substance varies with the age of the subject; it is at first composed of irregular nucleated cells; at that period, the ivory and the enamel begin to be formed, though not yet solid; it afterwards becomes fibrous, by the stretching of the cells, when it brings forth the dental sac and the cementum. The first rudiments of the teeth resemble diminutive spheres, made up of myriads of cells. Those which are most easily discovered belong to the deciduous teeth; towards the third or fourth month, the gums of the permanent teeth are easily perceived in the human subject. In this primitive state, no sack or envelop confines these spherical bodies. Three divisions or partings take place in the interior of these spheroids before they become solidified. One is central, and eventually gives rise to the ivory; the second produces the enamel; and the most external division, the one where the dental sac has been formed, produces the cementum. These changes are the same for the deciduous and permanent teeth. The latter could never emerge from the capsules, which form a close receptacle for them, if a portion of the walls forming these capsules did not disappear, to allow the crown to press forward. This disappearance, which depends on a kind of absorption which the bony cells undergo, can also be observed in the osseous capsules which fix the deciduous teeth. But although, in several places, the jaws decrease in size, and lose the substance of which they are composed, these same jaws increase on other places, stretch out and make the room necessary for the growing teeth. This double molecular movement goes on until the face has attained its greatest development.—*Lancet*, Aug. 21.

6. *Absence of the Left Kidney.*—Prof. Förster relates (*Virchow's Archiv.*, March, 1858) the following example of this. The malformation was found in the body of a boy stillborn at the seventh or eighth month, brought to me from the Lying-in Hospital on the 18th of June, 1857, which exhibited no other anatomical abnormity. The left kidney, with the ureter belonging to it, was entirely absent; the place where the kidney should have lain was occupied exclusively by the intestine, the left supra-renal capsule was in its proper position, and exhibited no change, except that it was larger than the right. The right kidney occupied its normal situation, and appeared rather larger than usual, the calyx and pelvis being somewhat enlarged, in other respects its structure was exactly that of a single kidney. Nor did any trace of the fusion of two kidneys exist; the right ureter was greatly enlarged, ran in a winding course behind the lower extremity of the colon, which was filled with meconium, and opened on the left side into the bladder, exactly in the place where, in the normal condition, the left ureter usually comes down; the caliber of the ureter at this point was very narrow, and would admit of the introduction of only very fine probes; by this circumstance, but still more by the pressure which the colon must have exercised on the ureter, the dilatation of the latter was accounted for. The urinary bladder was considerably distended with urine, which, on pressing the bladder, very readily flowed from the normal urethra; where the right ureter should normally have entered the bladder, there was no trace of it. The testicles still lay within the abdominal cavity, but were very near the entrance into the inguinal canal.

Absence of one kidney, and of the ureter belonging to it, is a malformation

frequently observed, but the remarkable course of the right ureter to the left side, and its opening into the left half of the bladder, is one of the greatest rarities. To explain this latter malformation, we must assume that the portion of the ureter, which lay on the left side, originally belonged to the left ureter, so that, consequently, the upper half of the left, and the lower half of the right ureter were deficient, while the halves which were formed united to constitute one ureter, half belonging to each side. If this explanation be correct, the malformation must have taken place at a very early period of the development of the ureters, at a time in which both ureters consisted only of rows of cells, lying parallel to one another; for, in the period immediately following, the ureters are mutually too remote to admit of the hypothetic fusion taking place. Possibly there is a time at which the first foundation of both ureters consists of a single row of cells, which subsequently divides by a separation of the cells in a certain direction into two rows; in that case the occurrence can be explained by supposing that after this separation the development of the left superior and of the right inferior row of cells was arrested, and so but a single series remained.—*Dublin Journ. Med. Sci.*, Aug. 1858.

MATERIA MEDICA AND PHARMACY.

7. *Influence of Liquor Potassæ and other fixed Caustic Alkalies upon the Therapeutic Properties of Henbane, Belladonna, and Stramonium.*—In our No. for April last (p. 501), will be found some interesting observations on this subject, communicated to the Royal Medical and Chirurgical Society by Dr. A. B. Garrod.

Dr. G. has since (June 22, 1858), read before the same society a second paper, the object of which was:—

1. To prove that the active principles of the plants under consideration are absolutely destroyed by the influence of the caustic alkalies.
2. To show the ratio which must exist between the different preparations of the plants and the alkalies for the neutralization to be perfect.
3. To ascertain the time demanded for the decomposition to be complete.
4. To illustrate clinically the influence of the alkali in preventing the occurrence of symptoms, and removing such when large medicinal doses of these solanaceous drugs are administered.

Dr. Garrod, before proceeding to discuss these various heads, brought under notice a few points relating to the nature of liquor potassæ, and the properties of some of the officinal preparations of henbane, etc., showing that the former, although strongly caustic, still possessed but little neutralizing power, containing so small an amount of potash, not more than 6.7 per cent.; and that most of the preparations of henbane, belladonna, and stramonium, as the tinctures and extracts, were strongly acid in reaction, and hence, before the alkali could act upon the active principles contained in them, it must first neutralize this acidity, next separate the alkaloids from the acids with which they naturally are combined in the plants; that, therefore, much more was required (measured by the physiological or therapeutic strength of the drugs) to neutralize the galenical preparations than their alkaloids, or the active principles themselves. To prove that the active principles were absolutely destroyed by the alkali, he (Dr. Garrod) performed several experiments in the following manner: A solution of atropine was made by dissolving it in water, with the aid of a little spirit, dividing the solution into two parts, adding to one some carbonate of potash, to the other a sufficiency of liquor potassæ, and permitting both to remain for some hours. Chloroform was afterwards well shaken with both solutions, and allowed to subside, the supernatant fluid being poured off, and the chloroform washed with a little distilled water. Each portion was evaporated spontaneously in glass dishes. From the solution to which carbonate of potash had been added, a gummy matter was obtained (soon, however, becoming crys-